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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,950	03/10/2004	Toru Takeuchi	42530-6800	4866

21611 7590 01/29/2007  
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EXAMINER
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MCCLAIN, GERALD

ART UNIT	PAPER NUMBER
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3653

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/797,950

Applicant(s)

TAKEUCHI, TORU

Examiner

Gerald W. McClain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6-14, 17-20 and 22-29 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5, 15, 16 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-14, 17-20 and 22-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10 March 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Claims 4-5, 15-16, and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 28 December 2006.

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

Reference US 5,765,985 is mistyped. The reference should read 5,756,985.

### *Claim Objections*

Claims 22-29 are objected to because of the following informalities: Each new claim should be presented with underlining throughout the claim. Appropriate correction is required. See MPEP § 1453(V)(C).

Claim 10 is objected to because of the following informalities: there should be a comma after "guiding units" [sic] on line 2. Appropriate correction is required.

Claim 12 is objected to because of the following informalities: "Claim 11" should read "Claim 9". It appears that the antecedent terms refer to Claim 9 and not Claim 11. Appropriate correction is required.

Claim 19 is objected to because of the following informalities: remove "one of" in line 2; there is only one "transmitted beam of light". Appropriate correction is required.

Claim 22 is objected to because of the following informalities: the semicolon in line 3 should be a colon. Appropriate correction is required.

Claim 24 is objected to because of the following informalities: add "of" after "one end" in lines 2 and 3. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The first and second columns that are part of the optical guide unit are not described in the disclosure or other claims.

Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which

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was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The facets that are part of the reflecting light transmitting member are not described in the disclosure or other claims.

Claim 28 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in the disclosure or claims is the reflecting light transmitting member described as a trapezoid.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2-3, 6, 9-14, 17, 20, 22, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "detecting projecting surface member" in line 9. There is insufficient antecedent basis for this limitation in the claim. Should the limitation be "detecting projecting surface"?

Claim 6 recites the limitation "full amount position" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "detecting projecting section" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. Should the limitation be "detecting projecting *surface*"?

Claims 9 and 11-12 recite limitation relating to multiple "end" and "column" structures in multiple instances. There is insufficient antecedent basis for this limitation in the claims. Please be absolutely clear as to what specific "end" or "column" is being referenced (examples: second end of the first cylinder, first end of the second cylinder, second end of another structure).

Claim 9 recites the limitation "reflecting surface" in lines 9 and 11. There is insufficient antecedent basis for this limitation in the claim. Which "reflecting surface" is it?

Claims 10 and 13-14 recite the limitation "guiding units" in multiple instances. There is insufficient antecedent basis for this limitation in the claims. Should the limitation be "*optical guide* units"?

Claim 11 recites the limitation "emitter section" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "receiver section" in line 8. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-14, 17-20, and 22-29, as understood by the Examiner, are rejected under 35 U.S.C. 102(b) as being anticipated by Plesko (US 5,624,017).

Claim 1: banknote storing unit (21, 22); banknote receiving unit (103); moving unit (M2); optical guide units (See FIG. 10 below, 140, 142, G); projecting surface (190-192); receiving surface (See FIG. 10 below, 140, 142, G); portion (See FIG. 10 below: where 140, 142, and G meet 122); surface (195); optical emitter-receiver pair units (See FIG. 10: 2, 147, 148; 3, 137, 138);

Claim 2: detecting projecting surface (See FIG. 10 below: top of 140, 142, and G); receiver section (See FIG. 10 below, curved sections of 3, 137, 138); optical emitter-receiver pair unit (See FIG. 10: 2, 147, 148; 3, 137, 138); detecting receiving surface (See FIG. 10 below: bottom of 140, 142, and G); emitter section (See FIG. 10 below, curved sections of 2, 147, 148);

Claim 3: detecting projecting surface (190-192); position detecting optical guide unit (See FIG. 10 below, 140, 142, G); light beam (column 8, lines 40-49); emitter section (See FIG. 10 below, curved sections of 2, 147, 148); position detecting emitter-receiver pair unit (See FIG. 10: 2, 147, 148; 3, 137, 138); reflector member (See FIG. 10 below: top of 140, 142, and G);

Claim 6: detecting projecting surface (See FIG. 10 below: top of 140, 142, and G); detecting receiving surface (See FIG. 10 below: bottom of 140, 142, and G);

Claim 7: optical guide units (See FIG. 10 below, 140, 142, G); optical resin (See column 11, lines 38-29);

Claim 8: optical resin (See column 11, lines 38-29); acrylate resin (See column 11, lines 38-29);

Claims 9: **optical guide unit** (140); **first column** (See FIG. 10 below, top of 140); **second column** (See FIG. 10 below, bottom of 140); **first end of the first column** (See FIG. 10 below, bottom end of top of 140); **first reflecting surface** (See FIG. 10 below, bottom end cross section of top of 140); **first end of the second column** (See FIG. 10 below, top end of bottom of 140); **second reflecting surface** (See FIG. 10 below, top end cross section of bottom of 140); **side surface of the first column** (See FIG. 10 below, inside surface of top of 140); **detecting projecting section [sic]** (190); **side surface of the second column** (See FIG. 10 below, inside surface of bottom of 140); **detecting receiving section [sic]** (See FIG. 10 below, inside surface of bottom of 140); **projecting surface** (See FIG. 10 below, bottom surface of the bottom of 140);

Claim 10: guiding units [sic] (See FIG. 10 below: top of 140, 142, and G); receiving surface (See FIG. 10 below, 140, 142, G); projecting surface (190-192); surface (195); storing unit (21, 22);

Claim 11: **light emitting element** (147); **light** (column 8, lines 40-49); **first cylinder** (See FIG. G1 below, J); **first end of the first cylinder** (See FIG. G1 below, top of J); **second end of the first cylinder** (See FIG. G1 below, bottom of J); **light detecting element** (137); **second cylinder** (See FIG. G2 below, H); **second end of**



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**the first cylinder** (See FIG. G2 below, bottom of H); **portion of light** (144 and column 8, lines 40-49); **second end of the second cylinder** (See FIG. G2 below, top of H);

Claim 12: second end of the first column (See FIG. 10 below, bottom end of bottom of 140); projecting surface (See FIG. 10 below, bottom surface of the bottom of 140);

Claim 13: banknote receiving unit (103); optical emitter-receiver pair units (See FIG. 10: 2, 147, 148; 3, 137, 138); banknote storing unit (21, 22); optical guide units (See FIG. 10 below, 140, 142, G); condition (column 8, lines 49-50);

Claim 14: receiving unit (103); optical emitter-receiver pair units (See FIG. 10: 2, 147, 148; 3, 137, 138); enclosed unit (21, 22); optical guide units (See FIG. 10 below, 140, 142, G); condition (column 8, lines 49-50);

Claim 17: transmitting a beam of light from a receiving unit **towards** an enclosed unit to produce a transmitted beam of light (column 8, lines 40-58);

receiving the transmitted beam of light within the enclosed unit to produce a received beam of light (column 8, lines 40-58);

reflecting the received light beam to produce a reflected beam of light (column 8, lines 40-58);

projecting the reflected light beam out of the enclosed unit towards the receiving unit to produce a projected beam of light (column 8, lines 40-58);

detecting the projected beam of light to indicate a predetermined condition (column 8, lines 49-50);

Claim 18: detecting the projected beam of light indicates a true condition (column 8, lines 40-58);

Claim 19: interrupting one of the transmitted beam of light and the projected beam of light to indicate the condition that an object is disposed between the enclosed unit and the receiving unit (column 8, lines 40-58);

Claim 20: interrupting the reflected light beam of light to indicate the condition that an object is disposed at a predetermined position within the enclosed unit (column 8, lines 40-58);

Claim 22: projecting and receiving unit (2, 3); light projecting section (2); light receiving section (3); optical guide assembly (142); light (column 8, lines 40-49); first condition (column 8, lines 40-58); second condition (column 8, lines 40-58); banknote position detecting device (21, 22);

Claim 23: projecting and receiving unit (2, 3); light emitting element (2); photo-detection element (3);

Claim 24: projecting and receiving unit (2, 3); cylinders (See FIG. G1 below, J; See FIG. G2 below, H); first cylinder (See FIG. G1 below, J); one end of the light emitting element (See FIG. G1 below, top of J); second cylinder (See FIG. G2 below, H); one end of the photo-detection element (See FIG. G2 below, bottom of H);

Claim 25: optical guide assembly (142); first reflecting surface (See FIG. 10 below, bottom end cross section of top of 140); second reflecting surface (See FIG. 10 below, top end cross section of bottom of 140); light projecting section (2); light receiving section (3);

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Claim 26: reflecting light transmitting member (192); planar facets (sides of rectangle internally, see column 11, line 43); first reflecting surface (one side of rectangle internally, see column 11, line 43); second reflecting surface (another side of rectangle internally, see column 11, line 43);

Claim 27: optical guide assembly (142); optical emitting and receiving guide position (See FIG. 1 and FIG. 10, 142); projecting and receiving unit (2, 3); reflecting light transmitting member (192);

Claim 28: reflecting light transmitting member (192); solid plastic trapezoid (see column 11, line 38; a rectangle is a trapezoid);

Claim 29: first and second cylinder (See FIG. G1 below, J; FIG. G2 below, H; respectively); one piece (See FIG. G1 below, J; FIG. G2 below, H);

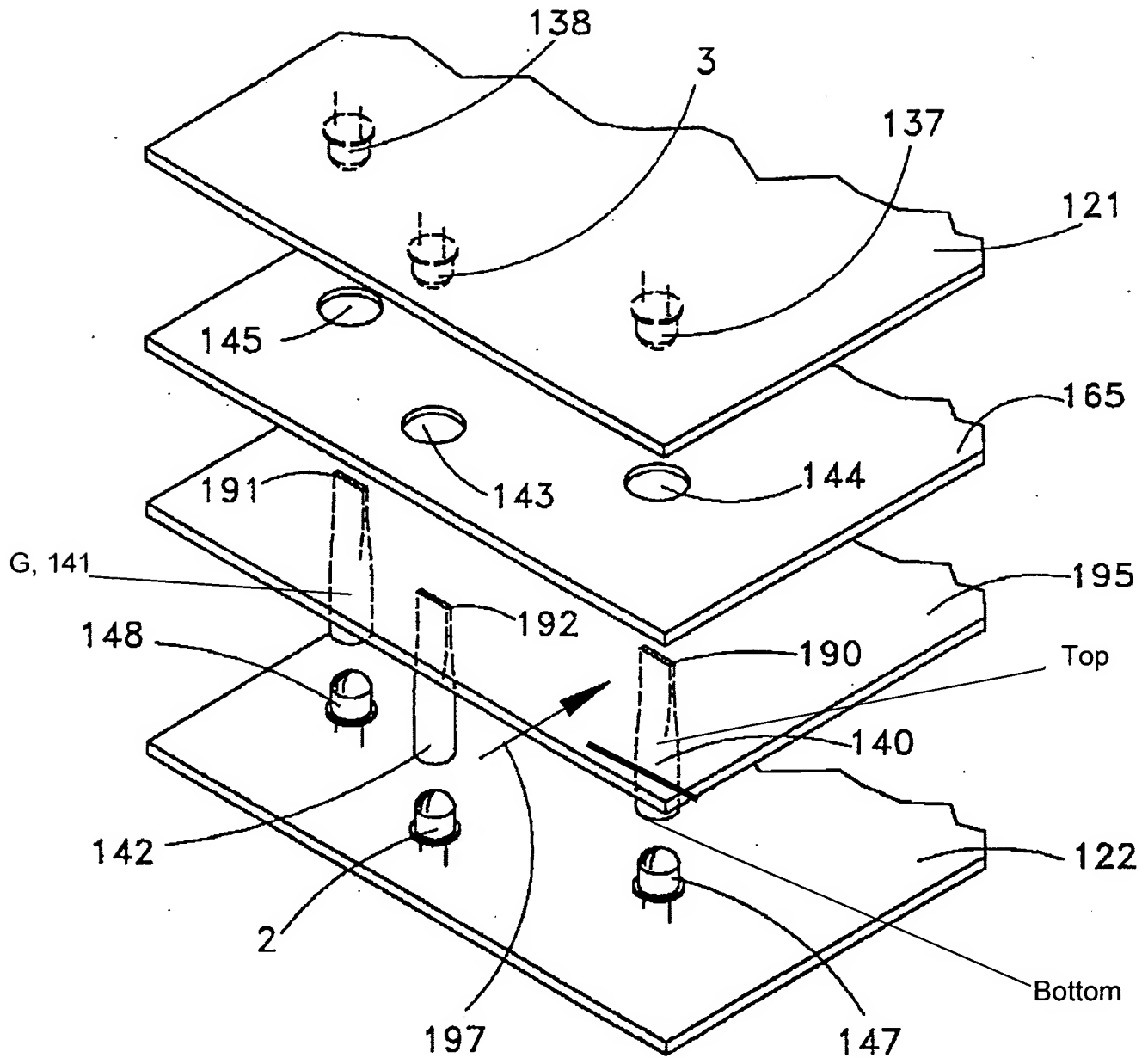
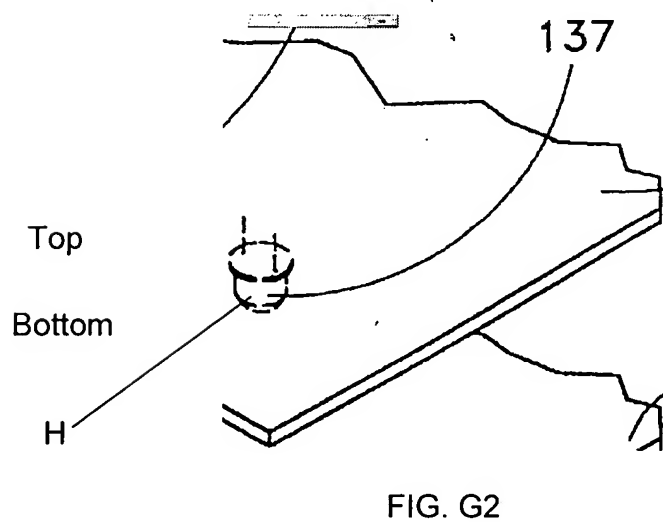
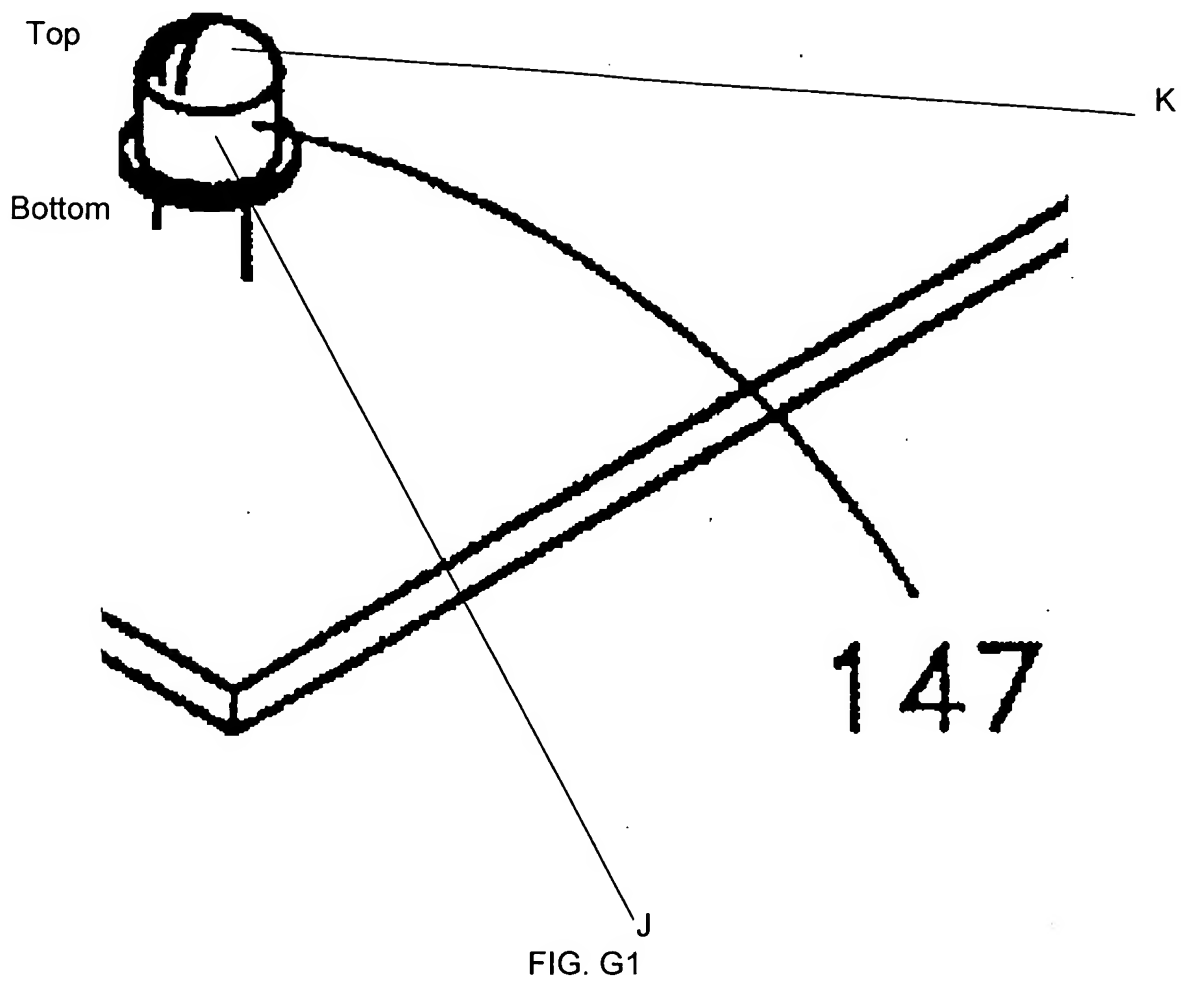


FIG. 10



**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald W. McClain whose telephone number is (571) 272-7803. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick H. Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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